

## **REMARKS**

The Office Action dated June 3, 2011, has been received and carefully noted. The above amendments and the following remarks are being submitted as a full and complete response thereto.

Claims 1-3 and 6-20 were pending. By this amendment, claim 1 is amended and claim 19 is cancelled. Thus, upon entry of this amendment, claims 1-3, 6-18, and 20 will be pending. Support for the amendments to the claims can be found in the specification as originally filed. Specifically, support for the amendments to claim 1 can be found, for example, in Fig. 1, page 13, lines 15-19, and page 14, lines 21-25. No new matter is added. Reconsideration of the rejection of the claims is respectfully requested.

### **Claim interpretation**

With regard to the recitation of “based on a kind of the cleaning gas” in claim 1, the Examiner takes the position that this recitation will not be treated as a “means-plus-function” term because there is no description of automatic detection of the kind of the cleaning gas. This is clearly incorrect. First, applicants submit that the Examiner is reading a feature of automation into the claims. There is no basis in the claim language for such an interpretation. Second, a manually operated switch is encompassed by the claim language because the recitation of “based on a kind of the cleaning gas” is a part of the claimed function of changing the polarity of the bias voltage, not an intended use limitation as asserted by the Examiner. 35 U.S.C. §112, sixth paragraph permits expression of an element for performing a specified function. The function claimed is

“changing the polarity of the bias voltage...based on a kind of the cleaning gas.” The element must be interpreted to include all parts of the function claimed.

Rejection under 35 U.S.C. §103

Claims 1-3, 6-9, and 19-20 are rejected under 35 U.S.C. § 103(a) as being allegedly obvious over Ishibashi (U.S. Patent No. 6,375,756, hereinafter “Ishibashi”) in view of Sawayama et al. (U.S. Pre-Grant Publication No. 2003/0164225, hereinafter “Sawayama”), Dowling (U.S. Patent No. 6,562,201, hereinafter “Dowling”), Harris et al. (U.S. Patent No. 4,781,803, hereinafter “Harris”) and Reale (U.S. Patent No. 5,451,754, hereinafter “Reale”). The Examiner has cited Sawayama for disclosing a constant-current power supply; Dowling and Harris for disclosing cathodic and anodic bias respectively; and Reale for disclosing a bias voltage switch. Applicants respectfully traverse this rejection.

Claim 1 is directed to a self-cleaning catalytic chemical vapor deposition apparatus comprising a heating power supply circuitry, a bias voltage power supply connected to the heating power supply circuitry to apply a bias voltage across two terminals of the heating power supply circuitry, and means for changing the polarity of the bias voltage.

Applicants submit that none of the cited references alone or in combination disclose or suggest a bias voltage power supply connected to the heating power supply circuitry to apply a bias voltage across two terminals of the heating power supply circuitry. The energy supply mechanism 30 disclosed in Ishibashi (col. 5, lines 11-13), the heat generating member current density controller 3014 disclosed in Sawayama and

relied upon by the Examiner (paragraphs [0045], [0287] and [0288]), and an AC voltage source 18 disclosed in Reale (col. 4, lines 14-15) are similar to the heating power supply circuitry of claim 1. However, Ishibashi, Sawayama, and Reale do not disclose or suggest a bias voltage power supply connected to the heating power supply circuitry recited in claim 1.

The Examiner alleges that Dowling and Harris disclose applying a cathodic and anodic bias, respectively. Applicants traverse the Examiner's position. Col. 1, lines 35-64 of Dowling disclose cathodic protection. Dowling discloses that cathodic protection prevents corrosion by introducing an electrical current from external sources to counteract the normal corrosion reactions (col. 1, lines 38-41). However, Dowling does not disclose or suggest providing a bias voltage power supply to apply a bias voltage across a heating power source. That is, cathodic protection disclosed in Dowling is not the same as applying a bias voltage. Similarly, although col. 3 and col. 4, lines 33-37 of Harris disclose anodic bias, Harris does not disclose or teach providing a bias voltage power supply to apply a bias voltage across a heating power source.

Taken together, none of the cited references disclose or teach an apparatus comprising a bias voltage power supply connected to a heating power supply circuitry to apply a bias voltage across two terminals of the heating power supply circuitry as presently claimed.

For at least the above reasons, claim 1 would not have been obvious over the cited references. Claims 2, 3, 6-9, and 20 because of their dependence from claim 1 also would not have been obvious over the cited references. Claim 19 is cancelled

thereby rendering its rejection moot. Accordingly, applicants respectfully request reconsideration and withdrawal of the obviousness rejection of claims 1-3, 6-9, and 19-20.

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, referencing Attorney Dckt. No. 029567-00010.

Respectfully submitted,



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